

CLAIMS:

1. A method for wirebonding leads of a plurality of lead frames being part of a lead frame assembly by a wirebonding tool to semiconductor products mounted on the respective lead frames, the lead frame assembly being indexable in an index direction relative to a wirebonding frame, and comprising a first row and an adjacent second row of lead frames as seen in the index direction, the lead frames being spaced from each other at a lead frame pitch in the index direction, the method comprising the steps of:

(a) clamping the leads of n ($n \geq 1$) adjacent lead frames of the first row by a first clamp, and wirebonding the leads of the n lead frames of the first row to the corresponding semiconductor products;

(b) clamping the leads of n adjacent lead frames of the second row to a second base member, and wirebonding the leads of the n lead frames of the second row to the corresponding semiconductor products;

(c) releasing the first clamp after step (a);

(d) indexing the lead frame assembly over n lead frame pitches relative to the wirebonding frame after step (a), the second clamp and the wirebonding tool following the index movement;

(e) releasing the second clamp after step (b);

(f) moving the second clamp opposite to the indexing direction over n lead frame pitches; and

(g) repeating steps (a)-(f).

2. The method according to claim 1, characterized in that after step (f), the n lead frames of the first row lead one lead frame pitch relative to the n lead frames of the second row.

3. The method according to claim 1 or 2, characterized by at least one further row of lead frames adjacent to the first row at the side facing away from the second row of lead frames, the first clamp in step (a) further clamping n lead frames of the further row adjacent the n lead frames of the first row.

4. The method according to any of claims 1-3, characterized by at least one further row of lead frames adjacent to the second row at the side facing away from the first row of lead frames, the second clamp in step (b) further clamping n lead frames of the further
5 row adjacent the n lead frames of the second row.
5. The method according to any of claims 1-4, characterized in that n is even.
6. The method according to any of claims 1-5, characterized in that the first
10 clamp is stationary relative to the wirebonding frame, as seen in the index direction.
7. Wirebonding apparatus for wirebonding leads of a plurality of lead frames being part of a lead frame assembly to semiconductor products mounted on the respective lead frames, the apparatus comprising:
- 15 - a wirebonding frame;
- an indexing device for indexing the lead frame assembly in an index direction relative to the wirebonding frame;
- at least a first clamp for clamping the leads of n ($n \geq 1$) adjacent lead frames of a first row of lead frames as seen in the index direction, the first clamp being stationary in
20 the index direction relative to the wirebonding frame;
- at least a second clamp for clamping the leads of n adjacent lead frames of a second row of lead frames adjacent the first row, the second clamp being movable in the index direction relative to the wirebonding frame; and
- a wirebonding tool for wirebonding the leads of the n lead frames of the first
25 and the second row to the corresponding semiconductor products, the wirebonding tool and the second clamp being adapted for following the index movement of the lead frame assembly.
8. Wirebonding apparatus according to claim 7, characterized in that the
30 wirebonding tool is adapted to perform a wirebonding operation during the movement of the second clamp.

9. Wirebonding apparatus according to claim 7 or 8, characterized in that the first clamp and the second clamp are situated generally opposite to each other, as seen transversely to the index direction.